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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,175	02/17/2004	Jeffrey A. Schultz	1981/660	9858

757 7590 03/28/2006

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

EXAMINER

RIVELL, JOHN A

ART UNIT	PAPER NUMBER
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3753

DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/780,175

Applicant(s)

SCHULTZ, JEFFREY A.

Examiner

John Rivell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/17/04 (application).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 22 and 23 been renumbered and referred to below as claims 21 and 22, respectively.

The drawings are objected to as generally failing the requirements of 37 CFR 1.84 as the drawings appear to be informal. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings

will not be held in abeyance.

The disclosure is objected to because of the following informalities: In the specification, the description of the operation of the embodiment of figure 3, at paragraph [0030] appears to be in error. Given that the valve device of fig. 3 is presumed to be inserted into a tire rim hole in the same manner that the embodiment of fig. 1 is inserted into the tire rim hole, the flange element 130 of fig. 3 would thus be located within the pressurized area inside the tire and in abutment with the "outer wall" of the rim. As such fluid pressure would appear to be relieved in a manner reverse to that specified in paragraph [0030]. That is, pressurized fluid, present within channel 120 will, upon reaching a value greater than the force of spring 126, would move valve head 122 from the valve seat to open a passage from within the tire to atmosphere through holes 105. Additionally, under the belief that paragraph [0030] is in error, paragraph [0033] describing an embodiment in which the position of the valve is "reversed" and functions in the manner that is believed appropriate for the embodiment of fig. 3, is not understood.

Appropriate correction is required.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

- The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 14-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Each of claims 14-17 require either the "flange" or the "detent" to contact either the "inner" or "outer" wall "of the tire". In view of the description of the device being assembled in a hole of the rim of the wheel assembly, (i.e. the wheel assembly consists of the tire mounted on the rim) it is difficult, if not impossible to envision the device attached to "wall of the tire" as recited in the claims. Below, these claims are rejected by interpreting the term "tire" to mean the rim of the wheel assembly to which the device is disclosed as being attached to.

Additionally, and independently of the above, relative to the above believed errant portion of the specification, claims 16 and 17 are further believed not fully supported by the specification in their recitations requiring the "flange" to "contact the "inner" wall of the rim and the "detent" to contact the "outer" wall of the rim. Under normal circumstances, a rim, without a tire mounted to it, has an "outer" wall which together with the interior wall of the mounted tire forms the pressure chamber inflated with air. The "inner" wall then becomes the interior wall portion of the rim, facing the vehicle axle, from which normally extends the standard inflation stem. In the event the device disclosed is actually mounted to function exactly as disclosed in paragraph [0030], then the device will not function to relieve pressure as an area of the valve head, on the spring side of the head subject to the greater tire pressure is greater than the area at 120 (as disclosed) subject to the same tire pressure value. The greater area, subject to the same pressure will produce a greater force on the valve tending to maintain the valve against the seat. This larger area, experiencing a larger force in

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concert with the spring force will not be overcome by the same pressure value acting on a smaller area at 120 alone to move the valve. Consequently, if the "flange" were to contact the "inner" wall of the rim, and the "detent" were to be in contact with the "outer" wall of the rim, such that the flange 130 is exposed to atmosphere to function as disclosed at paragraph [0030] then the device will not work.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7, 9-18 and 22 are rejected under 35 U.S.C. §102 (b) as being anticipated by Fuller.

The patent to Fuller discloses a "pressure relief valve (generally at stem unit 22), comprising: a valve insert (at cylinder 10) having an opening (e.g. space 56) at a first end and a pathway (18) extending towards the opening from a second end (upper, in the figure) of the valve insert (10); an adjustment member (release adjustment member 38) received within in the opening of the valve insert (10), the valve insert (10) and the adjustment member (38) defining a chamber (space 56) adjacent the pathway (18), the adjustment member (38) including a throughway (at any one of ports 42); a bearing element (the combined elements disc 30 and washer 34) within the chamber (space 56) and adjacent the pathway (18), a width of the bearing element (30, 34) being larger than a width of the pathway (18), a spring (48) within the chamber (56), the spring (48) under compression and in line with the bearing element (30, 34); and a cushioning member (at

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rubber plug 4) surrounding the valve insert (10), the cushioning member (4) allowing the flow of pressurized fluid (at inlet 6); wherein the spring (48) exerts a force on the bearing element (30, 34) such that the bearing element (30, 34) is biased against the pathway (18) and forms a seal between the chamber (56) and the pathway (18) as recited in claim 1.

Regarding claim 2, in Fuller, "the bearing element (30, 34) includes at least in part a sealing member (washer 34), the sealing member (34) adjacent to the pathway (18)" as recited.

Regarding claim 3, in Fuller, "the bearing element further comprises a pin (read on the upstanding stem labeled 22 extending upward from the upper surface of disc 30 and disc 30) adjacent to the sealing member (34)" as recited.

Regarding claim 4, in Fuller, "the pin (as noted above) is adjacent the spring (48)" as recited.

Regarding claim 5, in Fuller, "the pin further includes a receptacle (formed by lip 32 that receives the washer 34; see column 3, lines 24-26) that receives the sealing member (34)" as recited.

Regarding claim 7, in Fuller, "the valve insert (10) includes interior threads (12) and the adjustment member (34 inherently) includes exterior threads that engage with the interior threads (12) of the valve insert (10)" as recited.

Regarding claim 9, in Fuller, "the cushioning member (4) is made of rubber" as recited.

Regarding claim 10, in Fuller, "the cushioning member further comprises a flange (the portion of element 4 below rim 2) and a detent (shown as the small nub of element 4 above rim 2) for engagement with a tire rim (2)" as recited.

Regarding claim 11, in Fuller, "the cushioning member (4) further comprises an opening (at 6) in fluid communication with the pathway (18)" as recited.

Regarding claim 12, in Fuller, "a width of the bearing element (30 and/or 34) is smaller than a width of the chamber (56)" as recited.

Regarding claim 13, the patent to Fuller discloses a "pressurized tire (inherently attached to tire rim 2), comprising: a tire rim (2); a pressure relief valve (generally read at stem unit 22) attached with and in fluid communication with the tire rim (2), the pressure relief valve including: a valve insert (10) having a first (upper) end, at least one opening (defining space 56), and a pathway (18) extending towards the opening from a second (lower) end of the valve insert (10); an adjustment member (38) received within a cavity (at 56) of the valve insert (10), the valve insert (10) and the adjustment member (38) defining a chamber (at space 56) adjacent the pathway (18), the adjustment member (38) including a throughway (at any one of ports 42); a bearing element (at disc 30 and washer 34) within the chamber (56) and adjacent the pathway (18), the bearing element (30, 34) being larger than a width of the pathway (18), a spring (48) within the chamber (56), the spring (48) under compression and in line with the bearing element (30, 34); and a cushioning member (4) surrounding the valve insert (10), the cushioning member (4) allowing the flow of pressurized fluid (via inlet port 6); wherein the spring (48) exerts a force on the bearing element (30, 34) such that the bearing element (30,

34) is biased against the pathway (18) and forms a seal between the chamber (56) and the pathway (18)" as recited.

Regarding claim 14, in Fuller, "the cushioning member (4) further comprises a flange that contacts an outer wall (e.g. the pressure chamber face) of the" rim as believed.

Regarding claim 15, in Fuller, "the cushioning member (4) further comprises a detent (shown in figure 1 as a small nub above rim 2) that contacts an inner wall (e.g. the exposed to atmosphere face of the rim facing the vehicle axle) of the" rim as believed.

Regarding claim 16, in Fuller, "the cushioning member (4) further comprises a flange (here read as the small nub above rim 2) that contacts an inner wall (e.g. the exposed to atmosphere face of the rim facing the vehicle axle) of the" rim as believed.

Regarding claim 17, in Fuller, "the cushioning member further comprises a detent (here read as the portion of element 4 below the rim 2) that contacts an outer wall (e.g. the pressure chamber face) of the" rim as believed.

Regarding claim 18, in Fuller, "the valve insert (10) includes interior threads (at 12) and the adjustment member (38 inherently) includes exterior threads that engage with the interior threads (12) of the valve insert (38)" as recited.

Regarding claim 22, in making, using and/or assembling the device of Fuller, one necessarily performs a "method for inserting a pressure relief valve (generally at stem unit 22) into a tire (rim 2) comprising: inserting a pressure relief valve (at stem unit 22) having a cushioning member (4) into an opening of a tire rim (2); passing a detent

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(shown as a small nub above rim 2) of the cushioning member (4) past an inner wall (e.g. the exposed to atmosphere face of the rim facing the vehicle axle) of the tire rim (2); and contacting a flange (shown as the larger portion of element 4 below the rim 2) of the cushioning member (4) with an outer wall (e.g. the pressure chamber face) of the tire rim (2)" as recited.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fuller.

Fuller discloses the claimed invention except for "four openings to allow the flow of fluid into the chamber".

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ four openings in Fuller in place of single opening 18 of Fuller, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art unless a new and unexpected result is produced. *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). Here one need only duplicate the existing "opening" as many times as desired.

Claims 6 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuller in view of DeVuyst.

The patent to Fuller discloses all the claimed features with the exception of having "the valve insert (10) made of brass".

The patent to DeVuyst discloses that it is known in the art to employ a valve insert at 12, surrounded by a "cushion member" 11, containing an overpressure valve

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24, wherein the "insert member" 12 is made of "brass" (column 3, lines 3-10) for the purpose of accommodating the environment in which the insert is exposed to thus ensuring a long wear life.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Fuller a "brass" material for the material of the "insert" element 10 for the purpose of accommodating the environment in which the insert is exposed to thus ensuring a long wear life as recognized by DeVuyst.

Claims 8 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuller in view of Smith.

The patent to Fuller discloses all the claimed features with the exception of having "stainless steel" as the material of spring 48

The patent to Smith discloses that it is known in the art to employ "stainless steel" as the material for relief valve spring 72, which functions to bias a tire overpressure indicator 71, for the purpose of accommodating the environment in which the spring element is exposed to thus ensuring a long wear life.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Fuller "stainless steel" as the material of bias spring 48 for the purpose of accommodating the environment in which the spring element is exposed to thus ensuring a long wear life as recognized by Smith.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Rivell whose telephone number is (571) 272-4918. The examiner can normally be reached on Mon.-Thur. from 6:30am-5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on (571) 272-4930. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "John Rivell", with a stylized flourish at the end.

John Rivell
Primary Examiner
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j.r.